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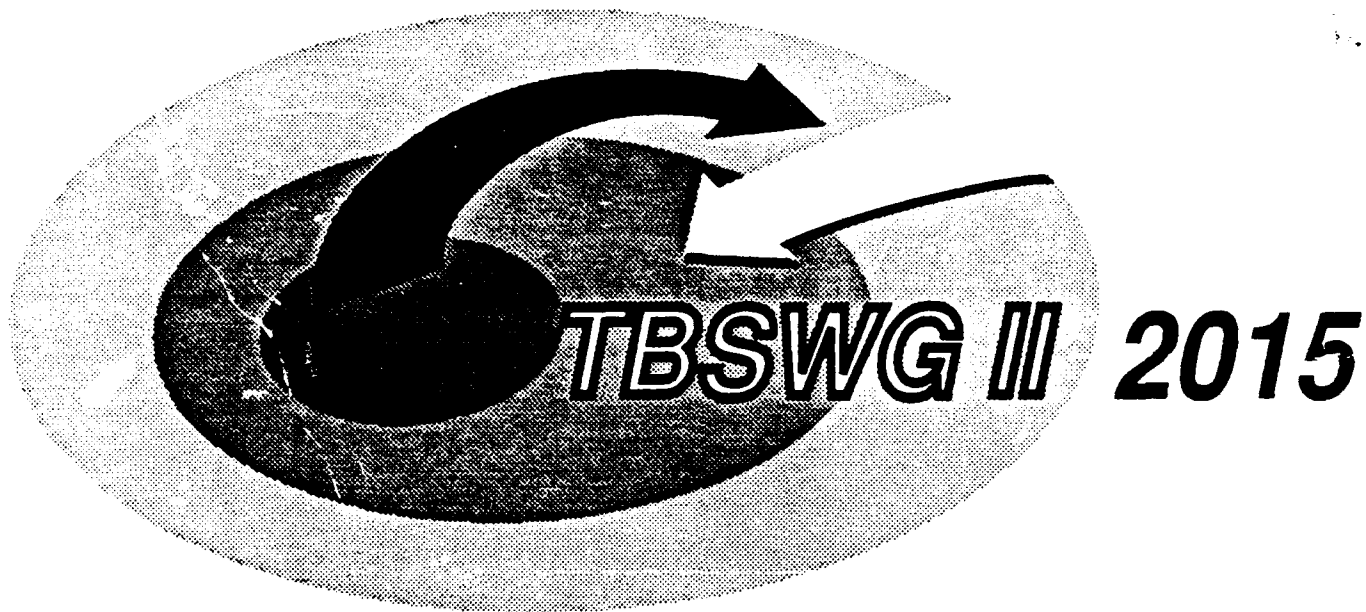
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Report on the
**TECHNOLOGY BASE SEMINAR WARGAME II
(TBSWG II)**

**Volume 3: TBSWG II Process Description
(Appendices F-I)**

20 November 1990

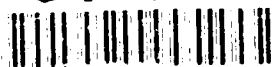


Booz•Allen & Hamilton Inc.
Bethesda, Maryland
23-26 April 1990

**The Combined Arms Center
Training and Doctrine Command**
Ft. Leavenworth, Kansas
6-8 June 1990

US Army Materiel Command
Deputy Chief of Staff for Technology Planning and Management
2800 Powder Mill Road
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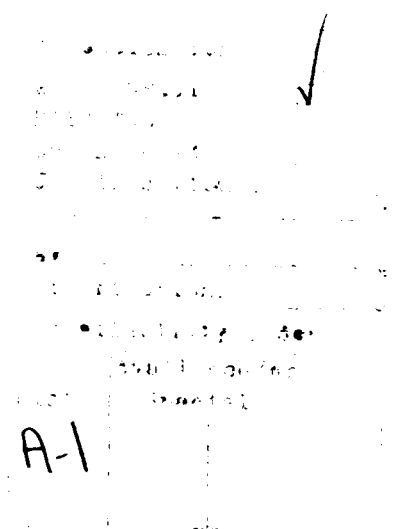
20 November 1990

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APPENDIX F: TBSWG II DETAILED PROCESS DESCRIPTION

The Army Materiel Command (AMC) Deputy Chief of Staff for Technology Planning and Management (DCSTPM) sponsored Phase 1 of the second Army Technology Base Seminar War Game (TBSWG II) at the Bethesda facilities of Booz•Allen & Hamilton Inc. on 23-26 April 1990. Phase 2 of TBSWG II, also sponsored by AMC DCSTPM, was hosted by the Combined Arms Center (CAC) of the Training and Doctrine Command (TRADOC) at Fort Leavenworth, Kansas, on 6-8 June 1990.

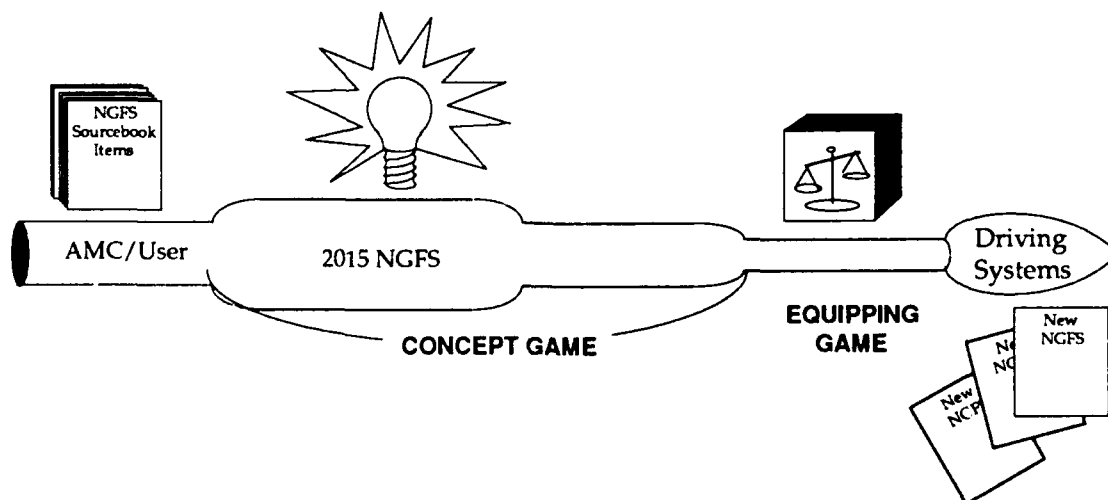
Purpose

To determine the technology base investment strategy, an understanding of the usefulness of technologies on future battlefields is needed. Since the Army fights with soldiers and equipment, not technologies, an evaluation must begin with a translation of technologies into concepts for future equipment or soldier enhancements. The enhanced soldier and equipment concepts can then be evaluated for their contribution to the future Army's capabilities. TBSWG II was designed to stimulate the development of creative equipment and soldier enhancement concepts (Phase 1) and to begin the process (Phase 2) of concept evaluation. The agenda for both Phases can be found in Appendix G of this volume.

Process

There were two phases in TBSWG II: the Concept Game and the Equipping Game. Both phases were run as seminar games (i.e., they were not computer games, nor were they computer assisted games). At this time, there are no computer models that can represent equipment that has not yet been designed. Figure F-1 represents

FIGURE F-1: Systems Selection



the TBSWG II process. The width of the "pipe" varies to represent the variation in number of future soldier and equipment concepts. It begins on the left with a large number of concepts as presently described in the recently published Next Generation / Future System Source Book. During Phase 1 (Concept Game), the number of concepts temporarily increased as the players developed new scenario-specific concepts. The width of the pipe then contracted as the teams decided which system they believed would be most useful in each scenario.

During the period between phases, the TBSWG Task Force, in conjunction with the Force Design Bureau of Combined Arms Combat Developments Agency (CAC), developed unit organizations for play during Phase 2 (Equipping Game). As a result of unit designs for Phase 2, the number of systems within a scenario was greatly reduced for two reasons:

- Only the system concepts needed for each region-specific vignette were included in the Source Book for that region.
- Many of the system concepts were small items that did not appear on an actual unit table of organization and equipment.

Finally, the regional teams determined the most useful systems during Phase 2, represented by a decrease in the width of the "pipe." Many of these useful systems will require additional description and analysis before they can be accepted as actual future systems.

Objectives

There were four major objectives for TBSWG II:

- Identify the potential to exploit technology on a 2015 battlefield.
- Conceptualize the tactical operational environment to stimulate revolutionary thinking.
- Provide senior Army leadership with estimates on how technology can support future battlefield concepts.
- Acquaint developers and users with the benefits / limitations of emerging technology and battle concepts.

Although both phases contributed to the TBSWG II objectives, Phase 1 was unconstrained by economic realities. During Phase 2, equipment and personnel availability was constrained by force design and deployment assets.

Participants

TBSWG II players were Army technologists assisted by Air Force and Navy technologists and industrial technologists, members of the Board of Army Science and Technology who are participating in the Strategic Technologies for the Army

(BAST / STAR) study. Proponents for development of fighting concepts for the next century, AirLand Battle Future (ALBF), from CAC participated in TBSWG II planning and provided necessary ALBF expertise. Representatives from TRADOC, US Army John F. Kennedy Special Warfare Center, US Southern Command, US Special Forces Command, US Transportation Command, US Army Europe, and other Army agencies advised the players, providing expertise specific to their commands. The participant list is provided in Appendix H, and job descriptions for all participants are shown in Appendix I, both in this volume.

Wargame Advisory Group (WAG) and General Officer Steering Committee (GOSC)

To assist in TBSWG game design, a Wargame Advisory Group made up of members from AMSAA, TRADOC Headquarters Combat Developments, TRADOC Analysis Command (TRAC), Combined Arms Combat Developments Agency (CAC), Concepts Analysis Agency (CAA), and Applied Physics Laboratory (APL) met several times. After the WAG approved the TBSWG concept and preliminary design, they were both presented to and approved by the GOSC in November, 1989. The GOSC is chaired by the AMC DCSTPM; other members are the TRADOC DCSDC, CAC Commander, and Commandant of the Command and General Staff College (CGSC). The GOSC met during the final plenary session to evaluate emerging results and approve the Phase 2 concept and preliminary design.

DATA SOURCES

Since the setting for TBSWG II was a hypothetical world in the year 2015 with mythical countries, there is no data base, history of the future, or Army field manual to which to turn for data. There are, however, substitutes which somewhat depend upon expert judgement. Although these data are somewhat subjective, we believe that decisions based upon them are better than decisions based upon no data. The major sources are the Next Generation / Future System (NGS/FS) descriptions, player and advisor expertise, the developing concepts for AirLand Battle Future for warfighting in the twenty-first century, the force designs for 2015, and the scenarios developed for testing ALBF.

NGS / FS Descriptions

In March 1990, the AMC DCSTPM and the TRADOC DCSCD jointly published the first version of the NGS / FS Source Book. This book contains complete descriptions of both the next generation systems (systems that are projected to replace those presently in the acquisition cycle) and future systems (systems that are now projected to replace the next generation systems, but which still have technical barriers to overcome). The 4-page NGS / FS descriptions include a statement of

operational need, enabling technologies, planned demonstrations, completion dates, a list of key features, AMC and TRADOC points of contact, and other technical data, some of which is classified.

TBSWG II Phase 1 Future System Source Books

To reduce the size of the Source Book, thus lessening the information load on the players, a subset of the NGS / FS Source Book was used for the Blue side in Phase 1. The amount of information per system was reduced from four pages to two, and all next generation systems that were projected to be replaced by future systems were removed. The remaining unclassified part was sent to all participants as one of the read-ahead items. Both the unclassified and the smaller classified TBSWG Blue Future System Source Books were provided in the seminar rooms for use by either Red or Blue teams during Phase 1. A copy of the unclassified book is provided in Volume 4 (Appendix J).

A TBSWG Red Future System Source Book, with different systems for each region, was developed for TBSWG II by the Army Intelligence Agency. This book is classified. It was available in the seminar rooms for use by the Red teams.

TBSWG II Phase 2 Future System Source Books

The Blue Future System Source Books used for Phase 1 contained so many systems that the players had difficulty using the books. Therefore, between the two phases, the TBSWG Task Force extracted the systems from the Blue TBSWG Phase 1 Future System Source Book that the teams had thought would be most useful to make region-specific source books for Phase 2. Some systems had been created during Phase 1, and these needed to be added to the books. More complete system descriptions of the new systems were developed by the Army laboratories and by the Research, Development and Engineering Centers (RDECs) for Phase 2.

To reduce the number of systems in the Blue Phase 2 Future System Source Book, only major end items or items that seemed to provide a revolutionary method for fighting or for support, were included. Those systems for which it is extremely difficult to determine the value added (e.g., a liquid viscosity meter), but which are expected to have relatively low research and acquisition costs, and which are expected to be available for every soldier or unit by 2015, were not included. The Blue Phase 2 "Future System Source Books were available in each seminar room. A copy of this book is provided in Appendix K, Volume 4.

The players were also given a short, unclassified Blue System Summary which contained one-sentence descriptions of each system in the Blue Phase 2 Future System Source Book. In general, the players found that the summaries were more useful for quick reference during the game than were the longer Source Books. A copy of this document is provided in Appendix A, Volume 2.

Technology Expertise

Technology expertise was provided by senior technologists, most of whom are directors of Army laboratories or technical directors of Army Research, Development and Engineering Centers. To assure that a wide range of technological expertise was applied to each scenario, the technology players were divided into three teams of "rotating players." Three regional seminars ran concurrently, one for each of the three scenarios (Latin America, Southwest Asia, and Europe). In Phase 1, each regional seminar was repeated three times so that each technology team could apply their expertise to a 2015 conflict in each setting.

Within the regional rotation scheme, each technology player was also given the opportunity to be both a Blue and a Red player. The alternation between Red and Blue allowed each technology player to think of technological methods by which the Blue systems could be defeated. Then, by applying competitive strategies, they devised methods to counter these possible countermeasures.

Since the purpose of Phase 1 was to generate new ideas for technology applications, the Army technologists whose position requires that they function as the senior advocate for specific technologies were assigned as the rotating players who created the new future systems. Technologists from the other services and industry were also assigned to the rotating player positions.

Operational Expertise

For each scenario, there was a "permanent" set of players and advisors for both Phase 1 and Phase 2. The majority of these permanent teams were military. The permanent players were expert in application of the developing concepts of ALBF and military operation contingencies unique to specific types of conflict. Advisors provided the necessary expertise in areas such as planning for use of space, possible 2015 threat capabilities, planned 2015 deployment assets, regional aspects, and logistic requirements and plans. In addition to a wide range of Army commands and agencies, advisors came from other services and unified and specified commands.

AirLand Battle Future

In addition to CAC players who were in the process of developing new ALBF concepts on each regional team, players were provided additional ALBF information. Prior to the game, every participant was given a paper on ALBF by General Foss, TRADOC Commander (see Appendix L, Volume 5). Then, one of the first briefings was on ALBF by Major General Wayne Knudson, CAC Commander. Prior to Phase 2, all military advisors from Fort Leavenworth viewed an ALBF video tape by Colonel Steve Kempf, Director, Concepts and Force Alternatives, CAC. Each seminar room during Phase 2 had at least one player or advisor from CAC Concepts and Force Alternatives and one from TRADOC Analysis Command (TRAC). The TRAC representatives were involved with developing the scenarios and modeling efforts for evaluating ALBF concepts.

Force Designs

The forces for TBSWG II were designed to fit the concept of the future, smaller Army with tailorable corps. The briefing charts used to explain this concept are provided in Appendix M, Volume 5. Rather than large numbers of heavy forces in country, the forces in the Southwest Asia and Latin America scenarios had to be totally deployed from the US. Some forces were available in place in Europe, but not as many as now or as are postulated for the near future.

To develop the Blue unit organizations for 2015, the TBSWG Task Force replaced present equipment with future systems in existing unit types and created strawman organizations for new equipment which does not have a present equivalent. CAC then massaged these strawman designs, specifically for TBSWG II, into units that better approximated a unit design which might have been created by them. The Red organizations were created especially for TBSWG II by CAC Threats, based on the equipment in the TBSWG Red Future System Source Books.

Scenarios

Three scenarios allowed players to consider three different types of conflict and three different types of terrain and weather in Latin America, Southwest Asia, and Europe (see Figure F-2). The Europe scenario represented the frequently studied high-intensity conflict against a major power, while the Latin America scenario represented a low intensity conflict featuring insurgency and special forces in a small undeveloped country.

The Southwest Asia scenario also represented high intensity combat. In contrast to the Europe scenario, however, the SWA scenario represented a contingency

FIGURE F-2: Three Operational Settings



conflict in which all forces, equipment, resupplies, and personnel had to be deployed initially. Scenarios were based on those developed by CAC for 2004 to evaluate ALBF. However, for TBSWG II, one of the contractors (Military Professional Resources, Inc.) extended the scenarios to 2015. These retired military officers also played in the game, one on each side in each region, providing additional military experience.

In all three scenarios, the countries other than the United States are mythical and are designed to represent possible, but not necessarily expected, enemy capabilities. In addition to differences in terrain, weather, and types of conflict, the scenarios were also differentiated by possible technology levels:

- Europe: High technology not of US origin.
- Southwest Asia: High technology from all world sources, including the US.
- Latin America: Generally, but not entirely, low technology.

Vignettes

For the Concept Game, the players used only the general types of warfare that could be expected in the region to determine the soldier and equipment concepts that might be useful in that region. During Phase 2, however, they were required to apply that equipment, now configured into units, to specific vignettes within a battle. The vignettes were designed so that each of the phases of a battle could be discussed as a discrete entity. Figure F-3 shows the vignettes used in Phase 2. The columns are labeled with the phases of battle and the rows with the regions. Cell entries include the title of the vignette and the order in which it was presented. Four vignettes were designed for each region with the expectation that the players might have time to play through only three of them. In fact, since the Latin America and Southwest Asia scenarios were conceptually more difficult than the Europe scenario, four vignettes were completed only in Europe. The other two scenarios completed only the first three vignettes.

PHASE 1, CONCEPT GAME

Phase 1, the Concept Game, provided the technologists with an opportunity to creatively apply emerging technologies to materiel solutions for problem areas of the emerging concepts of ALBF. In addition, it allowed operational players and advisors to begin to think creatively about doctrinal solutions using potential new equipment. As well as determining which of the systems from the Phase 1 TBSWG II Source Book are most useful for ALBF by region and type of conflict, players were expected to create concepts for new future systems to solve ALBF problems. During Phase 1, players discussed such realities as technological risks, equipment acquisition

FIGURE F-3: Vignette Design Scheme

SCENARIO \ ACTIVITY	RSTA/LRF	Maneuver	Special	SOF
LATAM	Locate and destroy light infantry bde <ul style="list-style-type: none"> • Examine utility of sensors in jungles. • Examine lethal fire systems. <p>4*</p>	Attack mech inf bde <ul style="list-style-type: none"> • Examine effectiveness of mobility systems. • Discuss lethal anti-armor systems. <p>3</p>	Examine individual soldier systems <ul style="list-style-type: none"> • Examine soldier support systems. • Identify suite of soldier support equipment. <p>1</p>	Hostage rescue <ul style="list-style-type: none"> • Examine insertion technologies. • Identify light weight disabling capabilities. <p>2</p>
Europe	Defeat attacking enemy recon bde <ul style="list-style-type: none"> • Examine effectiveness of sensors. • Discuss tech. solutions for detect/tgt'ing and military ops in urban terrain <p>1</p>	Attack enemy mech bde on move <ul style="list-style-type: none"> • Achieve mobility advantage over enemy. • Identify most lethal killing systems. <p>4</p>	Reconstitute US mech bde <ul style="list-style-type: none"> • Reduce CSS requirements. • Identify CSS requirements of high tech systems. <p>2</p>	Destroy command and control <ul style="list-style-type: none"> • Examine location capabilities. • Examine C3 destruction systems. <p>3</p>
SWA	Destroy enemy long range fire units <ul style="list-style-type: none"> • Examine sensor/fires integration. • Discuss deceiving enemy sensors. <p>1</p>	Attack enemy mech bde defending oil facilities <ul style="list-style-type: none"> • Breach barriers. • Counter enemy LRF. • Material disabling technologies. <p>2</p>	Conduct strategic deployment (unopposed) <ul style="list-style-type: none"> • Examine force trade offs. • Identify enabling technologies. <p>3</p>	Disable enemy airfield <ul style="list-style-type: none"> • Examine techs for desert insertion. • Identify tech for precision employment of low collateral damage systems. <p>4</p>

*Number denotes order in which vignette was played.

costs, availability of deployable assets, and manpower support requirements; the players were not, however, constrained during the creative process by these considerations.

Figure F-4 shows an abbreviated sequence of events and approximate amounts of time used for events within in Phase 1. After receiving scenario briefings, the players considered requirements and assumptions of the new ALBF for the expected types of missions and for the locale. They discussed the system or technology requirements for performing the missions. Players then focused on Battlefield Mission Areas (BFMAs), identifying problem areas which present or next generation systems could not support, and discussed the critical technologies required. For this part of the exercise, the TBSWG Task Force placed the BFMAs across the top of the matrix in priority order according to their apparent importance to ALBF. Players were asked to decide whether or not they agreed on the order (see Figure F-5). Next,

FIGURE F-4: TBSWG II Phase 1 Sequence

MONDAY, 23 April	TUESDAY, 24 April	WEDNESDAY, 25 April	THURSDAY, 26 April
Historial Perspective Briefing Geopolitical Briefing ALBF-C Briefing General Situation Briefing Deployment Briefing Game Procedure Briefing	Shortfall Identification Update/Devise Future Systems Caucus SESSION 2 Regional Scenario Briefing, Vision of the Battlefield, and Issue Identification BFMA Weighting	Caucus SESSION 3 Regional Scenario Briefing, Vision of the Battlefield, and Issue Identification BFMA Weighting "Showstopper" Identification ALBF-C Regional Issue Weighting	Regional Summaries by Spokespersons from each Group
WORKING LUNCH			
SESSION 1 Regional Scenario Briefing, Vision of the Battlefield, and Issue Identification BFMA Weighting "Showstopper" Identification ALBF-C Regional Issue Weighting Future System Allocation to BFMA "Showstoppers"	"Showstopper" Identification ALBF-C Regional Issue Weighting Future System Allocation to BFMA "Showstoppers" Shortfall Identification Update/Devise Future Systems	Future System Allocation to BFMA "Showstoppers" Shortfall Identification Update/Devise Future Systems Caucus	Synthesis Panel and Regional Team Leaders' Outbrief to GOSC

FIGURE F-5: Issue by Battlefield Mission Area Matrix

ISSUES		BATTLEFIELD MISSION AREAS							
		COMMAND AND CONTROL	INTELLIGENCE	FIRE SUPPORT	MANEUVER		COUNTER MOBILITY/ SURVIVABILITY	COMBAT SERVICE SUPPORT	AIR DEFENSE
					CLOSE COMBAT HEAVY	CLOSE COMBAT LIGHT			
		1	2	3	4		5	6	7
KNOW WHERE THE ENEMY IS ALL THE TIME	1								
SENSOR FIDELITY	2								
INFORMATION FUSION	3								
RANGE OF COMMO	4								
RANGE OF FIRES	5								
PRECISION MUNITIONS	6								
RAPID MOBILITY	7								
RECONSTITU- TUTE FORCES	8								

the players ordered the problem areas, so that the most important problems appeared in the upper left corner and the least important in the lower right corner.

Finally, the Red and Blue halves of the teams separated to caucus independently to discuss fighting strategies and the systems and technologies that they would use in this region. The Red side developed countermeasures to the Blue technologies which had been discussed in open forum. After the caucus, the Red players presented the Red concept of operations and discussed their countermeasures to Blue systems. The Blue side then presented their plans and the whole team discussed Blue counters to the Red countermeasures. For every important problem area, the players either developed a new future system or identified the area as an issue for ALBF that could not be solved by materiel means or which needed further analysis.

PHASE 2, EQUIPPING GAME

Phase 2, the Equipping Game, required that the players apply forces to specific battlefield missions. The forces were constrained by the organizational design and deployment assets to represent real-world technological risk, acquisition costs, and manpower availability for specific contingency operations. Players were given the units available for the specific mission with a description of the numbers and types of equipment and soldiers. Although they were not required to use that specific organizational design, they were not allowed to add either soldiers or additional equipment. If they decided that they needed other equipment, they were required to give up an equivalent amount (by volume and weight) of other items.

Figure F-6 is an abbreviated agenda for Phase 2. In each region, the players were presented with three vignettes which represented a specific mission. These missions represented a "time slice" out of the total conflict and did not represent sequential time periods as might be expected in a computer simulation or computer-assisted game. Although the TBSWG Task Force prepared four vignettes for each region, the deployment vignette in Southwest Asia and the individual soldier vignette in Latin America were difficult for the players, and each of these regions completed only three of the vignettes. All four vignettes were completed in the Europe seminar.

Since Phase 2 had a three-day format, there were only two days available for gaming, including briefing preparation time and the time spent by the team leaders briefing the other teams. The final day was given to the Senior Officer Southwest Asia Game in the morning, and the team leader briefings to the senior officers in the afternoon. Therefore, there was not enough time for each of the teams to play in each of the regions. To assure that each technology area would be appropriately represented, the TBSWG Task Force requested an additional representative from some of the labs and centers. For example, the Chief of Engineers sent three representatives, one for each region.

FIGURE F-6: TBSWG II Phase 2 Sequence

WEDNESDAY, 6 June	THURSDAY, 7 June	FRIDAY, 8 June
<ul style="list-style-type: none"> - Introduction - Space Capabilities Briefing - Tailorable Corps Briefing - 2015 Force Capabilities Briefing - Game Procedures Briefing <p>Regional Seminar</p>	<p>Regional Seminar (continued)</p>	<ul style="list-style-type: none"> - Senior Officers Game <ul style="list-style-type: none"> • Background • General and Specific Situations - DOD Counter-Narcotic Plans
<p>Regional Seminar (continued)</p>	<ul style="list-style-type: none"> - Team Consensus Regional Briefing Preparation - Regional Briefbacks: <ul style="list-style-type: none"> • LATAM Briefing and Discussion • SWA Briefing and Discussion • Europe Briefing and Discussion - Data Collection 	<ul style="list-style-type: none"> - Regional Insight Briefingsto Senior Officer Review Panel: <ul style="list-style-type: none"> • LATAM • SWA • Europe - Summary - Discussion: Future Technologies

DATA COLLECTION

Several types of data provided the information required for preparing this report: rapporteur notes, team leader briefings, synthesis panel notes, facilitator notes, and questionnaire results. All reports, particularly the Synthesis Panel results from Phase 1, identified the systems which were most important for Phase 2 focus. The rapporteur and facilitator reports were the basis for force package designs tailored for each region. Participants completed an evaluation questionnaire for each phase and, during Phase 2, completed a comprehensive survey on their view of the Technology Base Investment Strategy.

Rapporteurs

Each regional seminar had at least two rapporteurs, one for the Red side and one for the Blue side. In Latin America and Southwest Asia, where discussions were expected to be the most difficult to follow, there were two Blue rapporteurs. Rapporteurs were analysts from AMC TPM, LABCOM Corporate Technology, and CAC. Their job was to synthesize the discussion and collect the details of new conceptual system designs as well as the rationale for why the system is needed in that region (e.g., the ALBF problem that the system should solve). Since most of the rapporteurs could type, they were able to transcribe, nearly word-for-word, many of the player comments into portable computers using a word processing program. They then printed a file copy of the notes after each session. Phase 1 notes were the major source for selecting equipment concepts for play in Phase 2.

Team Leaders

Team leaders were assigned from the Army technologists, a different member for each Blue and Red team in each region. They prepared consensus briefings for the GOSC in the plenary session on the last day of Phase 1. During Phase 2, there was only one team leader for each region. The team leaders' primary responsibility during Phase 2 was to brief the senior officers on the final day.

Synthesis Panel

The synthesis panel summarized and integrated results across regions and teams. The Army technologists whose positions require that they maintain a broad perspective across all emerging technologies formed the synthesis panel. These panelists included the AMC Chief Scientist, Director of Corporate Technology, Director of Army Research Office, and Director of Technology Planning and Management, assisted by senior analysts from the Army Material Systems Analysis Agency (AMSAA) and Training and Doctrine Command (TRADOC).

By design, in order to prevent involvement in parochial issues, the synthesis panel observed Phase 1 game play, but they were not active players. To aid their task of integrating present and new future systems into technology areas, three synthesis panel members confined their observations to specific regions, while one moved from region to region with each rotating team. Two other members served as lead synthesizers by observing all three regions and all three teams. The entire panel met every day to share observations and to prepare their briefings for the GOSC. These briefings were used in the decision as to which items of future equipment should be played in Phase 2 and in the preparation of this report.

In Phase 2, the synthesis panel acted as adjudicators in the game play and as advisors in the final briefing preparations. Their views reflect the team leader briefings that were used as inputs to this report.

Facilitators

A region-oriented report was prepared by each of the Booz • Allen facilitators. These reports covered the same topics as did the team leader briefings. However, since they are prepared by people who were involved in the detailed design of the game and who, therefore, had a greater understanding of the purpose and object of each phase, their reports are somewhat different than the team leaders' briefings. The facilitator reports are one of the sets of information used as background material in the preparation of this report.

Questionnaires

Two types of questionnaires were used for data collection. The first type was a process evaluation. A different version was used for each of the two phases. The second type, and the most important, asked the participants a wide variety of

questions about both their insights from the game and their views on the tech base investment strategy. An analysis of the results is included in Appendix E (Volume 1), and a copy of the questionnaire and complete questionnaire results are included in Appendices R and S, respectively (Volume 6).

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APPENDIX G: TBSWG II AGENDAS

TBSWG PHASE 1 AGENDA

Sunday, 22 April 1990

Guest Quarters, Bethesda

1800-1900 Registration

1830-2000 Icebreaker

East/West Towers, South Tower (Suite 900)

2000-2200 Competitive Strategies Readings

Dr. Masterson

Monday, 23 April 1990

East/West Towers, South Tower (Suite 900)

0715-0745 Advisors and Control Team Meeting

Ms. Van Nostrand

0800-0815 Introduction

MG Harrison

0815-0820 Administrative Remarks

Ms. Van Nostrand

0820-0830 Game Overview

LTC Schmidt

0830-0905 Historical Perspective

COL Kraus

0905-0940 Geopolitical Futures

Mr. Taylor

0940-0955 Break

0955-1100 AirLand Battle Future Concept

COL Kempf

1100-1115 Deployment

COL Green

1115-1130 General Situation

Mr. Gardiner

1130-1145 Game Procedures

LTC Schmidt

1145-1315 Lunch: Walk to Local Restaurants

1315-1500 Regional Seminar 1

Facilitators

1500-1515 Break

1515-1715 Regional Seminar 1 continued

Facilitators

Tuesday, 24 April 1990
East/West Towers, South Tower (Suite 900)

0800-1000	Regional Seminar 1 continued	<i>Facilitators</i>
1000-1015	Break	
1015-1100	Regional Seminar 1 continued	<i>Facilitators</i>
1100-1200	Regional Seminar 2	<i>Facilitators</i>
1200-1300	Working Lunch Guest Speaker: "Non-Lethal Forces"	<i>COL John Alexander</i> <i>US Army (Ret)</i>
1300-1445	Regional Seminar 2 continued	<i>Facilitators</i>
1445-1500	Break	
1500-1700	Regional Seminar 2 continued	<i>Facilitators</i>

Wednesday, 25 April 1990
East/West Towers, South Tower (Suite 900)

0800-0930	Regional Seminar 2 continued	<i>Facilitators</i>
0930-0945	Break	
0945-1200	Regional Seminar 3	<i>Facilitators</i>
1200-1300	Working Lunch	
1300-1500	Regional Seminar 3 continued	<i>Facilitators</i>
1500-1515	Break	
1515-1700	Regional Seminar 3 continued	<i>Facilitators</i>
1815-1900	Bus to Capitol Hill Club from Hotels (Bus will pick up at Guest Quarters and Marriott)	
1900-1930	Cocktails	
1930-2015	Dinner	
2015-2100	Speaker: Dr. William Smith Senior Staffer, Senate Armed Services Committee	
2000-2045	Bus to Guest Quarters and Marriott	

Thursday, 26 April 1990
East/West Towers, South Tower (Suite 900)

0800-1015	Team Regional Outbriefs	<i>Team Leaders</i>
1015-1045	Break	
1045-1200	Synthesis Panel Review	<i>Synthesis Panel</i>
1200-1330	Lunch (Walk to Local Restaurants)	
1330-1400	Methodology Brief to GOSC	<i>LTC Schmidt</i>
1400-1500	Synthesis Outbrief to GOSC	<i>Synthesis Panel</i>
1500-1530	Next Steps	<i>Ms. Van Nostrand</i>
1530-1545	Break	
1545-1630	Executive Session	<i>GOSC</i>

TBSWG PHASE 2 AGENDA

Tuesday, 5 June 1990
Airport Marriott Hotel, Kansas City, MO

1800-1900	Registration
1830-2000	Icebreaker

Wednesday, 6 June 1990
Airport Marriott Hotel, Kansas City, MO

0630	Bus #1 Departs to Bell Hall
0700	Bus #2 Departs to Bell Hall

Classroom 5, Bell Hall, Ft. Leavenworth, KS

0715-0745	Advisors and Control Team Meeting	<i>Ms. Van Nostrand</i>
0800-0810	Introduction	<i>MG Harrison</i>
0810-0845	Space Capabilities	<i>MG Knudson</i>
0845-0920	Tailorable Forces	<i>Mr. Keller</i>

0920-0935	2015 Force Capabilities	<i>LTC Schmidt</i>
0935-1000	Game Procedures	<i>Ms. Van Nostrand</i>
1000-1015	Break	

Seminar Rooms, Bell Hall, Ft. Leavenworth, KS

1015-1200	Regional Seminars	<i>Facilitators</i>
1200-1300	Lunch	

Seminar Rooms, Bell Hall, Ft. Leavenworth, KS

1300-1500	Regional Seminars continued	<i>Facilitators</i>
1500-1515	Break	
1515-1700	Regional Seminars continued	<i>Facilitators</i>
1700-1900	Battle Training and Simulation Facilities Tour	<i>CAC</i>
1910	Buses Depart to Airport Marriott Hotel	

Thursday, 7 June 1990
Airport Marriott Hotel, Kansas City, MO

0630	Bus #1 Departs to Bell Hall
0700	Bus #2 Departs to Bell Hall

Seminar Rooms, Bell Hall, Ft. Leavenworth, KS

0800-0950	Regional Seminars continued	<i>Facilitators</i>
0950-1005	Break	
1005-1200	Regional Seminars continued	<i>Facilitators</i>
1200-1300	Lunch	
1300-1445	Prepare Team Regional Briefings	<i>Team Leaders</i>
1445-1500	Break	

1500-1630	Team Regional Briefings	<i>Team Leaders</i>
	1500-1530: LATAM Briefing and Discussion	
	1530-1600: SWA Briefing and Discussion	
	1600-1630: Europe Briefing and Discussion	
1630-1730	Data Collection	<i>Ms. Van Nostrand</i>
1740	Buses Depart to Airport Marriott Hotel	

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APPENDIX H: TBSWG II PARTICIPANTS

PHASE 1 PARTICIPANTS 23-26 April 1990

EUROPE

Regional Seminar 1 Friend:

Mr. Barry Baskett (AVSCOM)
COL Gunnar Carlson (ASL) - TL
Mr. Michael Parker (CRDEC)
Dr. Clarence Thornton (ETDL)

Regional Seminar 1 Foe:

Mr. Wayne Wheelock (TACOM)
Mr. Morris Zusman (BRDEC)
COL Warren Higgins (VAL)
Mr. Timothy Dues (AFSC)

Regional Seminar 2 Friend:

Dr. William McCorkle (MICOM) - TL
Dr. Edward Wright (MTL)
Mr. John Cornette (ONR)
Dr. Lawrence Delaney (BAST/STAR)

Regional Seminar 2 Foe:

Dr. Thomas Davidson (ARDEC)
Dr. Robert Lewis (NRDEC)
Dr. Shen Shey (BAST/STAR)
Dr. Robin Keesee (ARI)

Regional Seminar 3 Friend:

Dr. John Frasier (BRL)
Mr. Anthony Campi (CECOM)
Mr. Kay Kimura (BAST/STAR)
COL Gregory Belenky (WRAIR)

Regional Seminar 3 Foe:

Dr. John Weisz (HEL)
Mr. Gerald Kovalenko (ONT)
Mr. Jerry Reed (HDL) - TL
Dr. Walter Boge (OCE)

Regional Control Team

Threat:	Ms. Pam Moynihan (ITAC)
SOF:	COL Douglas Richardson (SOCOM)
CINCREP:	COL Ken Carlson (CINCEUR) COL Dennis Saylor (CINCEUR)
Space:	Mr. Wencis Tovar (ASI)
Setting:	Mr. Al Waldak (MPRI)
Threat Systems:	Mr. Stu Prather (FSTC)
Facilitators:	Mr. Mark Herman (BAH) Mr. George Thibault (BAH)
Futures:	Mr. Paul Barnes (AMC)
Friend Rapporteur:	Mr. Joe Gamson (AMC)
Foe Rapporteur:	Mr. Steven Montgomery (LABCOM)
Friend Regional Experts:	Mr. Al Waldak (MPRI) MAJ Ellis Pennington (CAC)

Foe Regional Expert: Mr. Jim McAslin (MPRI)
Regional Coordinator: Mr. Fred Adler (AMC)

SWA

Regional Seminar 1 Friend:

Dr. Thomas Davisdon (ARDEC)
Dr. Robert Lewis (NRDEC) - TL
Dr. Shen Shey (BAST/STAR)
Dr. Robin Keesee (ARI)

Regional Seminar 1 Foe:

Dr. William McCorkle (MICOM)
Dr. Edward Wright (MTL)
Mr. John Cornette (ONR)
Dr. Lawrence Delaney (BAST/STAR)

Regional Seminar 2 Friend:

Dr. John Weisz (HEL) - TL
Mr. Gerald Kovalenko (ONT)
Mr. Jerry Reed (HDL)
Dr. Walter Boge (OCE)

Regional Seminar 2 Foe:

Dr. John Frasier (BRL)
Mr. Anthony Campi (CECOM)
Mr. Kay Kimura (BAST/STAR)
COL Gregory Belenky (WRAIR)

Regional Seminar 3 Friend:

Mr. Barry Baskett (AVSCOM)
COL Gunnar Carlson (ASL)
Mr. Michael Parker (CRDEC)
Dr. Clarence Thornton (ETDL)

Regional Seminar 3 Foe:

Mr. Wayne Wheelock (TACOM)
Mr. Morris Zusman (BRDEC)
COL Warren Higgins (VAL) - TL
Mr. Timothy Dues (AFSC)

Regional Control Team

Threat: Mr. Ed Besch (ITAC)
SOF: CPT Morrow (JFKSWC)
Space: COL O'Neill (ASI)
Setting: Mr. Gene Meyers (MPRI)
Threat Systems: Mr. Richard Buckley (FSTC)
Facilitators: Mr. Ray Haeme (BAH)
Mr. Bob White (BAH)
Futures: Mr. Paul Barnes (AMC)
Friend Rapporteur: Ms. Theresa Miller (AMC)
Mr. Timothy White (AMC)
Foe Rapporteur: Mr. Jerry Bulmash (LABCOM)
Friend Regional Experts: Mr. Gene Meyers (MPRI)
Mr. Ronald Magee (TRAC)
Mr. Thomas Wells (CAC)
Foe Regional Expert: Mr. John Sloan (MPRI)
Regional Coordinator: Ms. Donna Smith (LABCOM)

LATAM**Regional Seminar 1 Friend:**

Dr. John Frasier (BRL)
 Mr. Anthony Campi (CECOM) - TL
 Mr. Kay Kimura (BAST/STAR)
 COL Gregory Belenky (WRAIR)

Regional Seminar 1 Foe:

Dr. John Weisz (HFL)
 Mr. Gerald Kovalenko (ONT)
 Mr. Jerry Reed (HDL)
 Dr. Walter Boge (OCE)

Regional Seminar 2 Friend:

Mr. Wayne Wheelock (TACOM) - TL
 Mr. Morris Zusman (BRDEC)
 COL Warren Higgins (VAL)
 Mr. Timothy Dues (AFSC)

Regional Seminar 2 Foe:

Mr. Barry Baskett (AVSCOM)
 COL Gunnar Carlson (ASL)
 Mr. Michael Parker (CRDEC)
 Dr. Clarence Thornton (ETDL)

Regional Seminar 3 Friend:

Dr. Thomas Davis (ARDEC)
 Dr. Robert Lewis (NRDEC)
 Dr. Shen Shey (BAST/STAR)
 Dr. Robin Keesee (ARI)

Regional Seminar 3 Foe:

Dr. William McCorkle (MICOM)
 Dr. Edward Wright (MTL) - TL
 Mr. John Cornette (ONR)
 Dr. Lawrence Delaney (BAST/STAR)

Regional Control Team

Threat:	Dr. John Jackson (ITAC)
CINCREP:	LTC Bryan Batukis (CINCSOUTH)
Space:	COL David Jackson (ASTRO)
Setting:	Mr. Bernie Doneski (MPRI)
Threat Systems:	Mr. Jim Lowry (FSTC)
Facilitators:	LTC Phil Terry (TRADOC)
	Mr. Bob Statz (BAH)
	Mr. Bob Ryer (BAH)
Futures:	Mr. Jim Gaul (AMC)
Friend Rapporteur:	Mr. Ed Panuska (AMC)
	Mr. Glenn Waldron (TRADOC)
Foe Rapporteur:	Mr. Dan McDonald (LABCOM)
Friend Regional Experts:	Mr. Bernie Doneski (MPRI)
	Mr. Richard Wightman (CAC)
	LTC James Van Buskirk (JFKSWC)
Foe Regional Experts:	Mr. Sal Raineri (JFKSWC)
	Mr. Sam Gardiner (MPRI)
Regional Coordinator:	Ms. Pearl Gendason (AMC)

CONTROL (All Regions)

Ms. Sally Van Nostrand (AMC)
 LTC Dennis Schmidt (AMC)
 Joan Miller
 Mr. James Fox (CAC)
 Mr. Tom Nolan (AMSAA)
 Dr. Irving Alderman (ARI)
 Mr. Ron Vaughn (NAVY)
 Mr. Dale Pace (APL)
 Mr. Dan Shedlowski
 COL Jay Wilmeth (CAA)
 MAJ Jim Hoffman (TRAC)
 CPT Gregory Hoschiet (SPACECOM)
 Ms. Betty Irby (AMC)
 Dr. Andy Marshall (OSD/NA)
 Dr. Paul Berenson (TRADOC)
 LTC Arthur Faris (ODCSOPS)
 Mr. John Alexander (LAL)

Game Design
 Game Design
 Game Design
 Game Design, Phase 2
 Game Design, Phase 3
 Game Design, Phase 4
 Game Design
 Game Design
 Game Design, Phase 4
 Game Design, Phase 4
 Game Design, Phase 4
 Game Design, Phase 3
 Administrator
 Observer
 Observer
 Observer
 Observer

ADVISORS**Senior Military Advisors**

MG Wayne Knudson (CG, CAC)
 MG Jerry Harrison (DCSTPM, AMC)

Logistics Advisors

Long Range Logistics Planner:
 Mr. Don Feeny (DCSLOG)
 Logistics Concepts/Doctrine:
 Mr. Bob Dienes (LOGCEN)
 Future Logistics Systems:
 Mr. Charlie Beal (LOGCEN)

CAC Advisors

COL Stephen Kempf (CAC), ALBF-C
 Mr. Nicholas Comer (CAC Threats), Scenario
 Mr. John Bennett (CAC), Army Modernization
 Mr. Bill Robinson (CAC), Force Design

Airlift/Sealift

COL Darrell Green (TRANSCOM)

Intelligence Advisors

Ms. Kilby Hickox (LABCOM)
 Mr. Alex McGregor (AMCDCSINT)
 Mr. Cleaves Howell (AMCDCSINT)

SENIOR REVIEW GROUP/SYNTHESIS PANEL**Senior Review Group**

MG Wayne Knudson (CAC)
 MG Jerry Harrison (AMC)
 Mr. George Singley (SARDA)
 BG Stephen Silvasy (TRADOC)
 BG John Miller (CGSC)

Synthesis Panel

Dr. Richard Chait (AMC)
 Mr. Bruce M. Fonoroff (AMC)
 Mr. John Kramer (AMSAA)
 Mr. Arend Reid
 Dr. Gerland Iafrate (ARO)
 Dr. K.S. Masterson (BAH)
 Mr. Richard Vitali (LABCOM)
 COL O.E. Holleque (TRADOC)

PHASE 2 PARTICIPANTS**5-7 June 1990****EUROPE****Technology: Blue**

COL Warren Higgins (VAL)
 Mr. Jerry Reed (HDL)
 Mr. Morris Zusman (BRDEC)
 Dr. Edward Wright (MTL)
 Mr. Woodrow Holms (CECOM)
 Mr. Buford Jennings (MICOM)

Operations: Blue

MAJ John Barbee (CAL)
 LTC John Duty (DSRO)

Technology: Red

Mr. Pete Bolan (NRDEC)
 Dr. Thomas Davidson (ARDEC)
 Dr. Shen Shey (BAST/STAR)
 Dr. William Marcuson (OCE)
 Dr. Larry Puckett (BRL)

Operations: Red

Mr. David Traynor (CAC Threats)
 Mr. Ron Ziegler (CAC Threats)
 Mr. Elias Cozanitis (MPRI)

Regional Advisors:

SOF: MAJ James Holloway (SOCOM)
 CINCREP: COL Ken Carlson (CINCEUR)
 COL Dennis Seiler (CINCEUR)
 TACAIR: MAJ John Griesel (TACLO)
 CMSG Harold Williams (TACLO)
 Scenario: CPT Ray Bernhagen (TRAC)
 ALBF: MAJ Ellis Pennington (CAC)
 Space: Mr. Wencis Tovar (ASI)
 Setting: Mr. Al Waldak (MPRI)

Regional Control Team:

Facilitator: Mr. Mark Herman (BAH)
 Futures: Mr. Paul Barnes (AMC)
 Blue Rapporteur: Mr. Joe Gamson (AMC)
 Red Rapporteur: Mr. Steve Montgomery (LABCOM)
 Regional Coordinator: Mr. Steve Cohn (AMC)

LATAM**Technology: Blue**

COL Gregory Belenky (WRAIR)

Dr. John Weisz (HEL)

Dr. John Frasier (BRL)

Dr. Walter Boge (OCE)

Mr. Anthony Campi (CECOM)

Operations: Blue

MAJ Phil Hamilton (SOCOM)

LTC Timothy Hoffman (SAMS)

Regional Advisors:

CINCREP:

Space:

Setting:

TACAIR:

ALBF:

Regional Control Team:

Facilitators:

Futures:

Blue Rapporteurs:

Red Rapporteur:

Regional Coordinator:

Technology: Red

Dr. Robert Lewis (SOCOM)

Mr. Barry Baskett (AVSCOM)

Mr. Timothy Dues (AFSC)

Mr. John Cornette (ONR)

Operations: Red

Mr. Sal Raineri (SOCOM)

MAJ James Kindel (CAC Threats)

SSG Roland Martinez (CAC Threats)

Mr. Sam Gardiner (MPRI)

LTC Bryan Batulis (CINCSOUTH)

COL David Jackson (ASTRO)

Mr. Bernie Doneski (MPRI)

CPT Steve Creamer (CAC)

MAJ Charles Marachian (CAC)

LTC Phil Terry (TRADOC)

Mr. Bob Statz (BAH)

Mr. Jim Gaul (AMC)

Mr. Ed Panuska (AMC)

Mr. Glenn Waldron (TRADOC)

Mr. Dan McDonald (AMC)

Ms. Pearl Gendason (AMC)

SWA**Technology: Blue**

Dr. James Savage (CRDEC)

Dr. Clarence Thornton (ETDL)

Mr. Wayne Wheelock (TACOM)

Dr. William McCorkle (MICOM)

Dr. Ed Link (OCE)

Operations: Blue

MAJ Clinton Schillare (SAMS)

MAJ Michael Thompson (SAMS)

MAJ Paul Melody (SAMS)

Regional Advisors:

SOF:

Space:

LTC James Van Buskirk (JFKSWC)

LTC David Linder (ASI)

Technology: Red

Dr. Robin Keesee (ARI)

COL Gunnar Carlson (ASL)

Mr. Gerald Kovalenko (ONT)

Dr. Lawrence Delaney (BAST/STAR)

Mr. Carmine Spinelli (ARDEC)

Operations: Red

Ms. Barbara Webster (CAC Threats)

MAJ Kevin Crawford (CAC Threats)

Mr. John Sloan (MPRI)

Setting:	Mr. Gene Myers (MPRI)
TACAIR:	LTC Dick Wendlandt (CAC)
ALBF:	Mr. Tom Wells (CAC)
Scenario:	MAJ Dave Vance (TRAC)
Regional Control Team:	
Facilitator:	Mr. Ray Haeme (BAH)
Futures:	Mr. Jim Predham (AMC)
Blue Rapporteurs:	Ms. Theresa Miller (AMC) Mr. Timothy White (AMC)
Red Rapporteur:	Mr. Jerry Bulmash (LABCOM)
Regional Coordinator:	Mr. Robert Neuman (LABCOM)

CONTROL (All Regions)

Ms. Sally Van Nostrand (AMC)	Game Director
LTC Dennis Schmidt (AMC)	Game Design
Ms. Betty Irby (AMC)	Administrator
Ms. Angela Martin (AMC)	Special Assistant
Ms. Marian Davenport (AMC)	Administrative Support
LTC Arthur Faris (DCSOPS)	Observer
Ms. Marion Singleton (LABCOM)	Observer
Dr. James Rosen (RAND)	Observer
Mr. Jack Howard (FORSCOM)	Observer
Mr. David Bassett (LABCOM)	Observer
Mr. Gene Visco (HQDA)	Observer
Mr. Seth Bonder (VRI)	Observer
Mr. David Russo (HQDA)	Observer

ADVISORS**Game Design Advisors:**

Mr. James Fox (CAC)
 COL Jay Wilmeth (CAA)
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 Dr. Dale Price (JHU/APL)
 COL Bob Ames (CSW)
 LTC Rod Stuart (CAA)
 Mr. Ron Vaughn (NAVY)
 Mr. Tom Nolan (AMSAA)

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 Mr. Nicholas Comer (CAC Threats)
 LTC John Boles (CAC Threats)
 LTC Arthur Kyle (Weather) (CAC Threats)

Airlift/Sealift Advisors:

CDR Herbert Jones (TRANSCOM)
 MAJ Michael McCoy (MACLO)
 LTC Richard Kearsley (TRANSCOM)

Ft. Leavenworth Advisors*Army Modernization Memo:*

Mr. John Bennett (CAC)

Force Design:

Mr. Bill Robertson (CAC)
 Mr. Bob Keller (CAC)
 MAJ Keith Hitchcock (CAC)
 LTC Ronald Jones (CATA)
 LTC John Boxberger (SAMS)

Logistics Advisors:*Long Range Logistics Planner:*

Mr. Don Feeney (DCSLOG)

Logistics Concepts/Doctrine:

Mr. Bob Dienes (LOGCEN)

Future Logistics Systems:

Mr. Charlie Beall (LOGCEN)

SENIOR REVIEW GROUP/SYNTHESIS PANEL**Senior Review Group**

Gen Carl E. Vuono (CSA)
 Gen John W. Foss (TRADOC)
 Gen Edwin H. Burba, Jr. (FORSCOM)
 Gen. William G. T. Tuttle (AMC)
 LTG John M. Shalikashvili (USAREUR)
 LTG Leonard P. Wishart III (CAC)
 MG Wayne Knudson (CAC)
 MG Jerry C. Harrison (AMC)
 MG Samuel A. Leffler (DISC4)
 BG Stephen Silvasy, Jr. (TRADOC)
 BG John Miller (CGSC)
 BG James M. Lyle (CATA)
 BG Robert T. Howard (TRAC)
 COL Norman Williams (LOGCEN)
 Mr. Michael Bauman (TRAC)
 Dr. Paul Berensen (TRADOC)
 Dr. Dan Willard (DUSA/OR)

Synthesis Panel

Mr. Bruce Fonoroff (AMC)
 Mr. George Singley (SARDA)
 Dr. Richard Chait (AMC)
 Mr. John Kramar (AMSAA)
 Dr. Arend Reid (AMSAA)
 Dr. Gerald Iafrate (ARO)
 Dr. K. S. Masterson (BAH)
 Mr. Richard Vitali (LABCOM)
 COL O. E. Holloque (TRADOC)

APPENDIX I: TBSWG II JOB DESCRIPTIONS

Job Title: Friend and Foe Team Players

Who: Each player from the technology communities (AMC, NRL, AFSA, BAST/STAR, ASB) will participate on both Red and Blue teams. Each player will have the following responsibilities.

Responsibilities:

- Prior to Phase 1, become familiar with conceptual systems in the read-ahead package. Be prepared to contribute to the development of additional systems as game play identifies deficiencies and opportunities.
- Develop a personal vision of the 2015 battlefield based on briefings provided at the beginning of the first day.
- Apply technical knowledge to help solve tactical problems that are briefed or developed in the course of team discussions.
- Help in the identification of operational/technological deficiencies in meetings the requirements of missions.
- Within each scenario, develop a sense of the relative contributions of each capability and each system's contribution to those capabilities.
- Assist in developing new future systems to meet capability deficiencies.
- Friendly players are to devise technological solutions to operational deficiencies on the 2015 battlefield.
- Foe (Enemy) players are to devise methods to defeat Friendly systems. Threat specialists will be available to assist you.
- Develop a briefing for the plenary sessions which identifies the importance of the regional settings, tactical problems, and technical solutions (selected players).

Job Title: Team Leaders

Purpose: To assign responsibility for post-game session briefing of team results for a scenario.

Responsibilities:

- Participates as a team member (see Friend and Foe Team Players description).
- Maintains control of group discussions. Ensures all views are heard.
- Develops a 10-15 (2-4 slide) briefing summarizing discussion topics and conclusions.
- Briefs results to team at end of scenario session and to Synthesis Panel on morning of last day.

Job Title: Synthesis Panel

Who: Players who ensure an independent, "top down" view of the game proceedings.

Responsibilities:

- Observe each team in each session.
- Develop an understanding of the driving factors in the discussions and conclusions of each team through observations of each session.
- Synthesize briefings presented by each team for each scenario on the morning of the last day of the Phase 1 game.

- Brief synthesized results to Senior Army Leadership Review Panel on last day.
- Review final report.

Job Title: Military and Threat Advisors

Who: TRADOC Threat and CINC Participants.

Responsibilities:

- Provide technical advice to players in areas of expertise.
- Advisors have been selected in the following areas:
 - Regional experts familiar with regional settings.
 - AirLand Battle Future Concept experts.
 - Mission area capabilities experts.
 - Future systems technological capabilities experts.
 - Threat doctrine and technology experts.
- Selected military and threat specialists are also identified as game players. These players have the additional responsibilities of Friend and Foe Team players. However, advisors are assigned to a specific region and to a Friend or Foe side rather than moving.

Note: In many cases, little published information is available. Advisors are expected to extrapolate their knowledge of the current situation in their area of expertise to answer questions about the future. They should make sure that the players understand the difference between facts and extrapolations.

Job Title: Control Team, Futures Advocate

Who: Advisors who ensure that players are playing in the future rather than in the past or present.

Responsibilities:

- Assure that future systems are discussed rather than either presently available systems or next generation systems which will be available soon. Some of the specific tasks associated with this responsibility are:
 - Prior to Phase 1, become intimately familiar with the Next Generation / Future System Sourcebook as modified for TBSWG II. For example, each futures advocate will know which systems are appropriate for each battlefield mission area (BFMA), will know how to find each system in the Sourcebook, will know the capabilities of each system, and will develop a personal vision of how each system might be used on a 2015 battlefield.
 - During the games, suggest appropriate systems as necessary to keep players from spending an inordinate amount of time determining whether or not there is already a system for a specific purpose or from spending time creating another description for a system that is already in the Sourcebook.
 - Help players find systems, as required, by telling them to which BFMA and/or page number they could/should refer.
- Assure that players are discussing future concepts for tactics and doctrine rather than past or present tactics and doctrine. Some of the specific tasks are:

- Prior to Phase 1, become familiar with the emerging AirLand Battle Future (ALBF) and develop a personal vision of how these battles might be fought; multiple methods/visions are better than only one.
- During the games, remind players of the appropriate ALBF concepts when they are discussing past or present doctrine or tactics instead of the future.
- If there is room, Futures Advocates will sit at the table and participate as a quasi-player. However, like other advisors, Futures Advocates must be careful that they do not dominate play of the game.

Job Title: Control Team, Rapporteur

Who: AMCTPM or LABCOM analysts who perform the function that may be the most important one in the entire game. Rapporteurs synthesize the long, frequently rambling conversations of the players into meaningful summaries which are usable by the synthesis team, by analysts between Phases 1 and 2, and for writing the phase report.

Responsibilities:

- Prior to each Phase, each rapporteur will study the various documents that the players and facilitators will be using so that they will fully understand the flow of the game as well as the issues, battlefield mission areas, battlefield fighting concepts, and systems that will be discussed. These documents include the process briefing-like charts, the "Conceptual" Systems Sourcebook, the player forms, various documents about the new AirLand Battle Future, and the read-ahead materials (you should have two sets prior to Phase 1, and another prior to Phase 2) which are provided to all players and advisors.
- Listen to all discussions in the Regional Seminars and synthesize/summarize them into meaningful phrases, sentences, and paragraphs as necessary to convey both the sense of decisions that are made and the reasons for those decisions. Keeping a record of both the rationale for all decisions as well as the decisions made is the reason you are there. The Synthesis Panel and the planning for Phase 2 are both dependent on how well you do this part. You will do this better if you understand all of the materials used by players and facilitators.
- If you take handwritten notes, read them quickly, revise as necessary to assure that others can understand them, then give them to a typist at each coffee break, noon break, and in the evening. Before they are given to the Synthesis Panel, you will review the typed version of your notes to assure that they are correct. If required changes are not extensive, you may make hand corrections to save time in copying and turning them over to the Synthesis Panel.
- If you take your notes on a computer, you must also revise as necessary to assure that others can understand them at each coffee break, noon break, and in the evening, then print them for copying for the Synthesis Panel. Please be sure that you save your file frequently and that you are saving it on the A drive. Since the information you are typing may be classified, we do not want it stored on the hard drive. If you do save your notes on the hard drive, it will have to be re-formatted.
- During Phase 1, you will be available for discussions with the Synthesis Panel members Tuesday through Thursday morning 0700-0800 and during the lunch period, Monday and Tuesday 1700-1900 and Wednesday from 1700 until time for the bus departure to Capitol Hill. During these same times you will print your notes, after revising if necessary to make them readable and usable, if you took notes on a computer. If your notes are handwritten, you will go over the typing and be

sure that your notes are usable during these times. During Phase 2, you will be available for the Synthesis Panel during similar times; exact schedule will be furnished after Phase 1.

- When the teams split into "Friend" and "Foe" discussion groups, the "Blue" rapporteur will always be with the "Friend" group for synthesizing purposes, while the "Red" rapporteur will be with the "Foe" group. Otherwise, you will both make your notes based on all conversations, whether Friend or Foe players are involved.
- The Facilitator should request the players to speak loudly enough for both you and the Advisors to hear and should advise you when something important is going on. If you are having trouble hearing, you will first advise the Facilitator, unless there is undue commotion in the room. In the latter case you should request that the Regional Coordinator better control the room. If the room is quiet and you continue to have problems, you will ask the entire group of players to speak up and to let you know when they think something important happened that they want written down. If the problem is too much other noise in the room and the Regional Coordinator cannot control it, then ask the Futures Advocate and the Government Facilitators to help control the noise level.
- Be sure that your name, date, and region are on all pages of your notes prior to turning them over for copying for the Synthesis Panel.

Job Title: Control Team, Regional Coordinator

Who: AMC OPM or LABCOM personnel are responsible for ensuring that the needs of the players, advisors, and rapporteurs are met so that the flow of the game is smooth and the data collected are useful to the Synthesis Panel and for later analysis. Further, Regional Coordinators must ensure that classified materials are handled correctly.

Responsibilities:

- Prior to the Ice Breaker, learn the names of the players and advisors who will stay with your region. During the Ice Breaker, find each of these people, introduce yourself and explain your function to them. The purpose of this is to be sure that they know that you will function as a problem-solver for them — you will provide additional materials or different advisors as needed and you will control access to the regional seminar room.
- Also prior to the Ice Breaker, study the list of attendees so that you know to which room each advisor is assigned. You will need to be able to find them quickly when needed.
- Prior to each Phase, each Regional Coordinator will study the various documents that the players and facilitators will be using so that they will fully understand the flow of the game as well as the issues, battlefield mission areas, battlefield fighting concepts, and systems that will be discussed. These documents include the process briefing-like charts, the "Conceptual" Systems Sourcebook, the player forms, various documents about the new AirLand Battle Future, and the read-ahead materials (you should have two sets prior to Phase 1, and another prior to Phase 2) which are provided to all players and advisors.
- Prior to the start of each of the three Regional Seminars, review the names of the players who will be moving into the room. As they arrive, introduce yourself and tell them that you are their "Regional Coordinator for this seminar." If necessary, herd them on into the room if they stand around outside when they should not be. It is important that each seminar start on time. Once you

get them all in the room, introduce the Facilitators, Futures Advocate, Rapporteurs, and Advisors by both name and function. It is particularly important that the Synthesis Panel members and the Team Leaders know the Rapporteurs.

- During the game, you must act as the "bad guy." Do not let the advisors talk among themselves so that they do not hear what the players are talking about and so that they do not interfere with either the Rapporteur or the play of the game.
- You must also control access to the room. During Phase 1, space is very limited and at no time should all of the Synthesis Panel or the non-regional Advisors or Control Team be all in the same regional seminar room. Nor can all of the Space Advisors, all Europe Advisors, etc., be in any one room unless the players and the Facilitator have requested it. If a special circumstance should arise so that an unusual occurrence such as one of the ones mentioned here is desired, you will be informed. Otherwise, do not let anyone else in if the room is already crowded. Once someone leaves, then you may let another in. There will be more space during Phase 2 and another set of rules for then will be provided prior to Phase 2.
- During the game, players, facilitators, futures advocates, or advisors may signal you that an additional advisor is needed. Quickly locate the person, and if they are free at the moment, bring them immediately back to the seminar room. You do this by discussing the situation with the Regional Coordinator of the other region (outside, not inside, the other room). If the advisor is busy at the moment, arrange a specific time that he or she will be available to your seminar and report the time back to your group.
- If supplies (paper, pencils, viewgraph materials, etc.) are needed that are not available in your seminar room, get them from the Admin people (Betty Irby and Lou Jumbercotta).
- During lunch and coffee break, because of the possibility of accidentally removing classified documents, do not let players remove playing materials and notebooks from the regional seminar room.
- At the end of a Regional Seminar, and at the end of each day, do not let players or advisors leave until their classified documents have been returned to their folders. Advisors may leave their documents in the seminar room at all times except at the end of the day.
- You will keep the folders near the door and have them hand the documents to you, one at a time. All in the line behind will wait while you file the documents in the correct folder (by name). Each folder must have the documents in it before the person leaves for the day.
- Between seminars you will exchange boxes of player folders with other Regional Coordinators so that you have the documents available for the correct players when they arrive.

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